



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,305	03/19/2004	James R. Gustafson	67,010-089; H2751-ED	7335

26096 7590 10/17/2006
CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

LAM, THANH

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,305

Applicant(s)

GUSTAFSON ET AL.

Examiner

Thanh Lam

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,10,11,13-18 and 20-30 is/are pending in the application.
4a) Of the above claim(s) 20-23 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,4,6,10,11,13-18 and 24-30 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1,4,6,10-11,13-18 and new claims 24-30 in the reply filed on 8/12/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

2. Claim 27 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Because the claim 27 is depended on cancel claim 12.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "said rotor rotatable while substantially submerged in said dielectric fluid to circulate said dielectric fluid through said cavity." as recited in claims 13,15, "an engine" recited in claims 17-18,23, and "a gas turbine engine" as recited in claim 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Response to Arguments

4. Applicant's arguments filed 5/8/06 have been fully considered but they are not persuasive.

In response to applicant's argument that the recited reference Arutunoff does not disclose “a thermally conductive dielectric fluid”.

The examiner submits that refers to Arutunoff discloses using “PURE oil” (see page 2, lines 15) is not electrically conducted if the oil is not dielectric fluid then the stator winding of Arutunoff would be short-circuit. Therefore, the “PURE oil” can be inherently defined as dielectric fluid.

In response to applicant's argument that there is no suggestion to combine the references Arutunoff and Mccabria, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,4-6,13-14,20-22, are rejected under 35 U.S.C. 102(b) as being anticipated by Arutunoff (US 1,531,724).

Regarding claim 1, Arutunoff discloses an electric motor assembly, comprising: a fluid circulation circuit: a housing (1, fig. 6) having a cavity (30,31) that is fluidly connected to said fluid circulation circuit; an electric motor having at least one electric motor component (4, fig. 6) disposed in the cavity a thermally conductive dielectric fluid (pure oil) for circulation through the cavity to substantially submerge (p. 2, col.1, lines 62-64, see oil level a-a', fig. 6) said at least one electric motor component.

Art Unit: 2834

Regarding claim 4, Arutunoff discloses the housing further comprises a partition (32) and the electric motor comprises a rotor (5), a stator iron (4), and a stator winding (18), the partition separating the rotor from the stator iron and the stator winding, wherein a space between an exterior portion of the partition and the housing (1) forms the cavity, and wherein the thermally conductive fluid fills the cavity to substantially submerge at least one of the stator iron and the stator winding without contacting the rotor.

Regarding claim 6, Arutunoff discloses the dielectric fluid is a dielectric oil.

Regarding claim 13, Arutunoff discloses said at least one electric motor component includes one of a rotor and a rotor bearing (3a, fig. 6) substantially submerged in said thermally conductive fluid.

Regarding claim 14, Arutunoff discloses dielectric fluid is in fluid communication with a bearing which supports a rotor shaft.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2834

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 10-12, 16 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arutunoff in view of McCabria (US 5034638).

Regarding claim 10, Arutunoff discloses all the aspect of claimed invention except for the housing has a fluid inlet and a fluid outlet the system further comprises: a fluid pump that circulates the dielectric fluid through the fluid inlet into the cavity and out of the fluid outlet; and a fluid reservoir that houses excess dielectric fluid.

McCabria discloses the housing (14) has a fluid inlet (D, fig. 1) and a fluid outlet (E or B) the system further comprises: a fluid pump (50) that circulates the dielectric fluid through the fluid inlet into the cavity and out of the fluid outlet; and a fluid reservoir (60) that houses excess dielectric fluid.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the housing configuration of Arutunoff to accommodate the combination structure as taught by McCabria in order to improve the cooling system.

Regarding claim 11, McCabria a heat exchanger (86 of McCabria) in communication with the dielectric fluid.

Regarding claim 12, McCabria a filter (86 of McCabria) connected upstream of the housing to filter particles from the dielectric fluid.

Regarding claim 16, Arutunoff discloses said fluid circulation circuit includes a portion (110 of McCabria) that is outside of said housing.

Regarding claims 24-27, the propose in combination of Arutunoff and McCabria disclose all the aspects the claimed invention.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (571) 272-2026. The examiner can normally be reached on t-f 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone

Art Unit: 2834

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh Lam
Primary Examiner
Art Unit 2834
